

## Exercise-Induced Oxidative Stress and Dietary Antioxidants

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**Context:** Overproduction of reactive oxygen and nitrogen species during physical exercise, exercise induced oxidative stress and antioxidant supplementation is interesting and controversial concepts that have been considered during the past decades.

**Evidence Acquisition:** In this review, we aimed to summarize current evidence in relation to antioxidant supplementation outcomes during exercise and physical activity. For this aim, we obtained relevant articles through searches of the Medline and PubMed databases between 1980 to 2013. Although major studies have indicated that antioxidants could attenuate biomarkers of exercise-induced oxidative stress and the use of antioxidant supplement is a common phenomenon among athletes and physically active people, there are some doubts regarding the benefits of these.

**Results:** It seems that the best recommendations regarding antioxidants and exercise are having a balanced diet rich in natural antioxidants and phytochemicals.

**Conclusions:** Regular consumption of various fresh fruits and vegetables, whole grains, legumes and beans, sprouts and seeds is an effective and safe way to meet all antioxidant requirements in physically active persons and athletes.

**Keywords:** Exercise-Induced; Oxidative Stress; Reactive Oxygen Species; Vitamin C; Vitamin E; Glutathione; Antioxidant; Minerals

### 1. Context

Oxidative stress, an impaired balance between free radical production and the endogenous antioxidant de

large growing body of literature regarding the origins of ROS generation in skeletal muscle, the functions and